Health of Homeless Women with Recent Experience of Rape

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There is limited understanding of the physical health, mental health, and substance use or abuse correlates of sexual violence against homeless women. This study documents the association of rape with health and substance use or abuse characteristics reported by a probability sample of 974 homeless women in Los Angeles. Controlling for potential confounders, women who reported rape fared worse than those who did not on every physical and mental health measure and were also more likely to have used and abused drugs other than alcohol. Results should serve to alert clinicians about groups of homeless women who may benefit from rape screening and treatment interventions.

KEY WORDS: **homelessness; homeless women; rape; violence; victimization.**
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Violence against women is receiving increased recognition but remains a relatively underdeveloped area of investigation.[1,2] Congress recently called for an increase in knowledge and control of violence against women, with a special focus on needs of underserved (e.g., homeless) women.[3] However, studies focusing on sexual violence against homeless women remain sparse,[4] and most have been limited by small convenience samples and questions that require women to label unwanted sexual intercourse as rape. Given these limitations, there is insufficient understanding of the physical health, mental health, and substance use or abuse correlates of sexual violence among these women.

The goal of this study is to document the association of rape with specific health and substance use/abuse characteristics as reported by a large, representative sample of homeless women.

METHODS

Subjects, Design, and Procedures

Data were collected from a probability sample of 974 homeless women aged 15 to 44 years in 60 shelters and 18 meal programs in Los Angeles County (detailed methods information is available from the authors on request). Women were defined as homeless if they had spent any of the past 30 nights in nontraditional housing. Sites were selected using lattice sampling; systematic random sampling was then used to select women. The combined nonresponse rate due to site and respondent refusals was 17.1%. Women who orally consented to participate and met study eligibility criteria (homeless, aged 15–44 years) were administered a 45-minute structured interview. Participants were paid $2.00 for a screening interview and $10.00 for the full interview.

Measures

Study instruments were pretested to ensure that items could be understood by respondents. Women were asked how many times in the past 12 months a man or boy made them have vaginal, oral, or anal sex by force or threat of harm. This operational definition was modeled after the National Women's Study, a survey of women in the general population.[5] We defined sex for the women as having a penis inside the vagina, mouth, or anus. Women were also asked their age, ethnicity, education, partnership status, total episodes of homelessness, total time homeless, whether they needed to and did see a doctor during the past year, and whether they wanted and were able to obtain substance abuse treatment.[6,7]

Physical Health. Women rated their current health using a 5-point Likert scale ("excellent" to "poor") item that has been used in general population and homeless surveys as a valid indicator of general health.[7–9] Physical functional status was assessed using the 6-item Physical Functional Status Scale from the RAND Health Insurance Experiment (HIE), which was developed with persons who were not homeless but has been used in previous studies of homeless people.[10,11] Women also reported whether they had experienced each of 9 gynecologic symptoms during the past 12 months (e.g., abnormal vaginal discharge, severe pelvic pain). These symptoms were selected for this study by a panel of physician experts based on their potential consequences and need for clinical evaluation.

Using items developed with nonhomeless samples,[12] women were asked if they had experienced each of 11 serious general physical health symptoms during the previous year (e.g., chronic cough, sudden weakness, or faintness). Physicians have indicated that all individuals should seek medical attention for these symptoms.

Mental Health. Psychological distress was assessed with the RAND Mental Health Inventory (MHI-5),[13] and a screener for a 12-month diagnosis of depression or dys-

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thymia.[14] The MHI-5 contains 5 items with responses on a 6-point scale that range from "all of the time" to "none of the time." The MHI-5 has well-established reliability and validity in general population studies and good reliability in homeless studies, and it has been shown to detect significant psychological disorders.[15] The internal consistency coefficient for the MHI-5 scale was 0.82 in this study. Mean-item scores were computed and linearly transformed to a range of 0 to 100. Scores less than 66 suggest high risk for mental health problems.[16] The depressive disorder screener consists of 2 items from the Diagnostic Interview Schedule (DIS)[17] and 1 item from the Center for Epidemiological Studies Depression Scale (CES-D).[18] Developed using a nonhomeless community sample, the sensitivity of this screener was 81% and the specificity was 95% when compared with the full DIS.[17]

Substance Use/Abuse. Lifetime alcohol and drug abuse or dependence were each assessed with 3-item screening instruments,[14] which were originally developed and tested for a homeless population.[19] Items for these instruments are from the DIS.[17] In nonhomeless community samples, the sensitivity of the alcohol screener against the full DIS ranged from 87% to 91% and the sensitivity of the drug screener was 91% to 92%.[14] Specificity for both screeners exceeded 91%. Respondents were also asked how many drinks they usually had in a day during the past month, and on how many days during the past 30 they used amphetamines or other stimulants; marijuana or hashish; cocaine, crack, or free base; LSD or other hallucinogens; and heroin. These items were based on those used in community surveys and in studies of homeless persons.[6,20]

Data Analysis

To assess differences between women who did and did not report rape, χ^2 tests were used. Logistic regression analyses for survey data (Stata Corp, College Station, Tex, 1993) identified independent physical and mental health and substance use correlates of rape controlling for sociodemographic characteristics, recruitment site (homeless shelter vs meal program), and the cluster sampling design. Data were weighted for analysis. Weights were inversely proportional to the separate probabilities of selection for each woman.

RESULTS

Thirteen percent of the women reported rape during the previous year, and half of these women were raped at least twice in that year. The mean age of the 974 women was 32.9 years (SD, 7.5); 56% were African American, 16% were white, 14% were Hispanic, and 14% were of other ethnicities; 63% had completed high school or received a GED; and 20% were living with a partner.

As shown in Table 1, women who reported rape had worse general health, were more likely to have one or more physical functional health limitations, and were also more likely to report 2 or more gynecologic symptoms and conditions, and 2 or more serious physical health symptoms. Rape victims were also more likely than nonvictims to report that although they needed to see a physician during the past year, they did not (53% vs 35%, respectively; $P < .001$; data not shown). Past-month psychological distress and past-year depression were more commonly experienced by homeless women who had been raped, as

Table 1. Physical Health, Mental Health, and Substance Use/Abuse Characteristics of a Probability Sample of 961 Reproductive Age Homeless Women Interviewed in Shelters and Meal Programs in Los Angeles County, by Rape Status During the Past 12 Months*

Characteristic	Raped At Least Once, %		Total	*P* Value†
	Yes (*n* = 132)	No (*n* = 829)	(*n* = 961)	
Fair or poor health	60.3	35.6	38.7	.001
At least 1 current physical functional health limitation	77.3	51.9	55.1	.001
At least 2 gynecologic symptoms past year	59.0	39.9	42.3	.001
At least 2 serious physical health symptoms past year	79.3	51.6	55.1	.001
Depression past year	71.3	45.5	48.7	.001
Psychological distress past month‡	70.2	44.9	48.0	.001
Lifetime alcohol abuse or dependence	49.7	38.0	39.5	.015
Lifetime drug abuse or dependence§	63.1	45.7	47.9	.001
Any alcohol use past 30 d	20.5	16.8	17.3	.319
Use of drugs past 30 d‖	27.9	22.9	23.5	.222

**Of 974 homeless women, 13 declined to respond to the question about rape, leaving a sample size of 961 for analysis. Number values are unweighted; percentages are weighted.*

†χ^2 test.

‡Based on score <66 on the Mental Health Inventory (MHI-5).

§Drugs include sedatives, amphetamines or other stimulants, analgesics or other prescription pain killers, inhalants, marijuana or hashish, cocaine or crack, hallucinogens, and heroin.

‖Drugs include marijuana or hashish, cocaine or crack, heroin, amphetamines or other stimulants, and hallucinogens.

were lifetime histories of drug and alcohol abuse or dependence. Women who reported rape were more likely to say they desired treatment for substance abuse but were unable to obtain it (20% vs 6%, respectively; $P < .001$; data not shown).

As shown in Table 2, multiple logistic regression analyses controlling for potential confounders supported the unadjusted associations between rape and measures of both physical and mental health. Women reporting recent rape fared worse than those who did not on every health measure. Rape victims were also more likely to have a lifetime history of drug abuse or dependence and to report recent drug use.

DISCUSSION

Findings from this investigation add to the literature indicating that sexual violence is a major problem confronting homeless women.[21,22] Though lifetime figures for rape among women in the general population do not exceed 25%,[2] over one tenth of homeless women reported rape in the past year alone, and many were raped more than once.

The findings also demonstrated a high prevalence of health and substance use or abuse problems among homeless women who had been raped as compared with those who had not. These results should serve to alert clinicians about groups of homeless women who may benefit from rape screening and treatment interventions.

Results are tempered by a number of limitations in addition to reliance on self-reported data. Rape was defined as penile penetration, although broader definitions are recommended.[3] Underreporting may have occurred because of women's reluctance to report unwanted sexual experiences, and the female interviewers were not indigenous to the homeless women's communities. Although the instruments we used were strong in many respects, measures not specifically developed and validated for use in this study population may affect the accuracy of our assessments. The temporal ambiguity inherent in a cross-sectional survey is a major limitation and prohibits conclusions about the directionality of the associations between rape and health and substance problems. This ambiguity highlights the need for research using longitudinal designs. Despite these limitations, the striking association of rape with all aspects of women's health suggests that all homeless women who present with serious mental, physical, or substance problems should be screened for violent experiences.

Table 2. Adjusted* Odds of Poor Physical and Mental Health Status and Substance Use and Abuse for Homeless Women Reporting Rape Within the Past 12 Months ($N = 955$)†

Measures	Odds Ratio	95% Confidence Interval	*P* Value
Fair or poor health	2.87	(1.64 to 5.01)	.001
At least 1 current physical functional health limitation	3.33	(1.89 to 5.88)	.001
At least 2 gynecologic symptoms past year	1.88	(1.10 to 3.22)	.022
At least 2 serious physical health symptoms past year	3.31	(1.84 to 5.93)	.001
Psychological distress past month‡	2.68	(1.37 to 5.24)	.004
Depression past year	2.87	(1.48 to 5.56)	.002
Lifetime alcohol abuse or dependence	1.83	(0.87 to 3.84)	.110
Lifetime drug abuse or dependence§	2.46	(1.26 to 4.79)	.009
Any alcohol use past 30 d	1.71	(0.78 to 3.76)	.181
Use of drugs past 30 d‖	2.11	(1.14 to 3.89)	.018

**Controlling for age, education, ethnicity, living with a partner, being newly homeless, and recruitment site (i.e., homeless shelter vs meal program).*

†Number value is unweighted.

‡Based on score <66 on the Mental Health Inventory (MHI-5).

§Drugs include sedatives, amphetamines or other stimulants, analgesics or other prescription pain killers, inhalants, marijuana or hashish, cocaine or crack, hallucinogens, and heroin.

‖Drugs include marijuana or hashish, cocaine or crack, heroin, amphetamines or other stimulants, and hallucinogens.

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